

<b>Name:</b> <b>Dr.E.BRINDHA</b>	<b>Photo</b> 			
<b>Designation:</b>	<i>Associate Professor</i>			
<b>Qualification:</b>	<i>M.Sc., Ph.D.,</i>			
<b>Area of specialization:</b>	<i>Laser Spectroscopy, Biophotonics, Imaging, Cancer Diagnosis</i>			
<b>Experience:</b>	<b>Industrial Experience</b>		<b>Teaching Experience</b>	
	<i>Nil</i>		<i>5 years 10 months</i>	
<b>Number of workshops / FDP/PDP attended:</b>	<b>Number of Workshops</b>		<b>Number of FDPs</b>	
	<i>3</i>		<i>10</i>	
<b>Publications:</b>	<b>Conference</b>		<b>Journal</b>	
	<b>National</b>	<b>International</b>	<b>National</b>	<b>International</b>
	<i>3</i>	<i>1</i>	<i>-</i>	<i>10</i>
<b>Books / Book Chapters</b>	<b>Nil</b>			
<b>Patents:</b>	<b>National</b>		<b>International</b>	
	<i>-</i>		<i>2</i>	
<b>Professional Body Membership</b>	<i>The Society of Photo-Optical Instrumentation Engineers (SPIE)</i> <i>Indian Laser Association (ILA)-Life Time Member</i> <i>Institute of Electrical and Electronics Engineers (IEEE)</i> <i>World Academy of Science, Engineering and Technology (WASET)</i>			
<b>Research Guidance</b>	<i>YES</i> <i>(4170004- Anna University Recognised Research Supervisor)</i>			
<b>Staff Achievements</b>	<i>Research Assistant-BRNS sponsored project “Setting up of laser facility for medical and technological applications” at Anna University,</i>			

Chennai, India during 2010 – 2013.

### Educational Qualifications:

	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc.,	Physics	2008	Quaid-E-Millath Government College for Women (Autonomous)	Madras University	80%	First
PG	M.Sc.,	Physics	2010	Ethiraj college for woment	Madras University	78.1%	First class
Research	Ph.D	Physics	2016	Anna University	Anna University, Chennai	NA	NA

### Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Dire Dawa University, Ethiopia	Assistant Professor	09.04.2018	28.02.2020	1	10	19
Sri Sairam Engineering College	Assistant Professor	02.12.2020	31. 08.2022	1	8	29
	Associate Professor	01.09.2022	Till date	2	3	17
				10	7	21

### Workshops/Seminars attended:

- Indo-Italian Workshop on Molecular Nanophotonics held on 24th – 26th July, 2013, Dept. of Physics, Anna University, Chennai, India.
- International Workshop on Biomedical Sciences and Technologies (IWBMST-2011) held on 2nd - 4 th March 2011, Anna University, Chennai 25, Tamilnadu, India.
- Workshop on Recent Trends in Medical Physics, sponsored by Board of Research in Nuclear Sciences – DAE, held on 25th – 26th March 2010, Dept. of Physics, Anna University, Chennai 25, Tamilnadu, India.

### FDP/PDP/STTP Attended:

- FDP on “Photonics” organized by Central University of Jharkhand from 18-01-2021 to 22-01- 2021.
- FDP on “Photonics” organized by KKR and KSR Institute of Technology of sciences from 08-02- 2021 to 12-02-2021.
- FDP on “Energy Storage” organized by KPR Institute of Engineering and Technology from 22- 02-2021 to 26-02-2021.
- FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 12 July, 2021 to 16 July, 2021. 11.

- FDP on “Fundamentals of Artificial Intelligence” from 13/09/2021 to 17/09/2021 at College of Technology and Engineering, Udaipur.
- ATAL FDP on " Photonics & LASER" from 20/09/2021 to 24/09/2021 at M E S COLLEGE OF ENGINEERING, KUTTIPPURAM.
- ATAL FDP on “Your Signature is your Identity - Exclusive for Women” from 27/12/2021 to 31/12/2021 at National Institute of Technology, Tiruchirapalli.
- ATAL FDP on “Artificial Intelligence In Contemporary Biomedical & Healthcare Applications: Fundamentals & Hands On MATLAB” from 21/02/2022 to 25/02/2022 at Gautam Buddha University, Greater Noida, U.P.
- Professional Development Program (PDP) –“INDIAN KNOWLEDGE SYSTEMS” during the period 20-11-2023 to 24-11-2023, organised by NITTTR, Chennai.
- Seven-Day National level Interdisciplinary FDP on “Emerging Teaching and Research Through Emerging Technology”, Department of Physics, Ethiraj College for Women, 22-26 & 29-30 July 2024.

#### Conference Attended:

- Participated and Presented a paper titled “NEAR INFRARED RAMAN SPECTROSCOPIC CHARACTERIZATION OF ORAL TISSUES OF NORMAL SUBJECTS, PREMALIGNANT AND MALIGNANT PATIENTS” in the Internal Conference on Research for Sustainable Development (ICRSD-2024)-organised by St. Joseph’s Arts and Science College, Kovur Chennai on 27 th March 2024.
- Participated in the 1st Global Web Forum Series on Science & Technology –Raman Spectroscopy and its Applications in Solving Crystal Structure organized by Department of Physics, Surana College Autonomous, Bangalore held on 20th September 2023.
- Participated and Presented a paper titled “Characterization of Urine of Normal Subjects and Oral Cancer Patients by Raman Spectroscopy” Proc. of 22nd National Laser Symposium, sponsored by Board of Research in Nuclear Sciences, Department of Atomic Energy was organised at Manipal Institute of Technology during January 8 to 11, 2014.
- 18th State Annual Conference on Association of Medical Physicists of India (TN & PY Chapter) – (AMPI TN & PY CON 2013) held on 18th -19th October 2013, Organized by Dept. of Medical Physics, Anna University, Chennai 25, Tamilnadu, India.

#### Journal Publications:

- “Emerging silver-doped strontium titanate nanostructures as photocatalysts for the degradation of organic pollutants under visible light”, Shanmugam M, C Jayashree, Rajasekaran R, **Brindha E**, Saeedah M A, Govind Raj M, J Kim, Abinaya S, Senthil B, Atchudan R, J. of Molecular Structure, Volume 1306, Year 2024, Pages 137854 DOI:<https://doi.org/10.1016/j.molstruc.2024.137854>
- Raman and Fluorescence spectroscopic characterization of Pteridines in the blood of normal subjects and oral cancer patients, **Elumalai Brindha**, Ramu Rajasekaran, Ganesan Bharanidharan, Biniyam Girma Manaye, Prakasarao Aruna, Singaravelu Ganesan, SPIE-Optical Biopsy XXII: Toward Real-Time Spectroscopic Imaging and Diagnosis, Volume 12836, Year 2024.
- Optical characterization of riboflavin as a potential biomarker in the diagnosis of cervical cancer, Ramu Rajasekaran, **Elumalai Brindha**, Ganesan Bharanidharan, Biniyam Girma Manaye, Prakasarao Aruna, Singaravelu Ganesan, SPIE-Optical Biopsy XXII: Toward Real-Time Spectroscopic Imaging and Diagnosis, Volume 128360H, Year 2024, DOI:10.1117/12.3010046.
- **Brindha Elumalai**, Prakasa Rao Aruna, Bharanidharan Ganesan, Dornadula Koteeswaran & Singaravelu Ganesan, ‘Raman spectroscopic characterization of urine of normal and oral cancer subjects’, Journal of Raman Spectroscopy, 2015, vol. 46, no.1, pp. 84–93.
- Pachaiappan Rekha, Prakasarao Aruna, **Elumalai Brindha**, Dornadula Koteeswaran, Munusamy Baludavid, Singaravelu Ganesan “Near-infrared Raman spectroscopic characterization of salivary

metabolites in the discrimination of normal from oral premalignant and malignant conditions”  
Journal of Raman Spectroscopy, 2016, DOI: 10.1002/jrs.4897.

- **Elumalai Brindha**, Ramu Rajasekaran, Prakasarao Aruna, Dornadula Koteeswaran and Singaravelu Ganesan, “Highwavenumber Raman Spectroscopy in the characterization of urinary metabolites of Normal subjects, Oral Premalignant and Malignant Patients”, Spectrochimica Acta. Part A, 2016 - doi:10.1016/j.saa.2016.06.048.
- **Brindha Elumalai**, Ramu Rajasekaran, Prakasarao Aruna, Dornadula Koteeswaran & Singaravelu Ganesan, ‘Discrimination of Premalignant conditions of oral cancer using Raman Spectroscopy of urinary metabolites’, SPIE Proc. 2015, vol. 9318, pp. 93180J1-7.
- **Brindha Elumalai**, Ramu Rajasekaran, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, “Raman spectroscopy of Bio Fluids : An exploratory study for oral cancer detection”, SPIE Proc. 2016, Vol. 97031T, DOI: 10.1117/12.2212684.
- Ramu Rajasekaran, **Brindha Elumalai**, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, “Fluorescence anisotropy characterization of urine in the diagnosis of cancer”, SPIE Proc. 2016, Vol. 97031P, DOI: 10.1117/12.2212618.
- Ramu Rajasekaran, **Brindha Elumalai**, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, “The effect of Stokes Shift in the discrimination of cervical cancer from normal subjects”, SPIE Proc. 2016, Vol. 97031Q, DOI: 10.1117/12.2212618.

#### **Resource Person:**

- Career Program on Career Prospects in Physics, organized by PG department of Physics, Ethiraj College for Women, Chennai, on 17.12.2024
- Guest lecture on “Vibrational Spectroscopy & its applications in Medical diagnosis” organized by St. Joseph’s Arts and Science College, Kovur, Chennai on 12-01-2023

#### **Online Courses:**

- *NITTTR-Module 1*
- *NITTTR-Module 2*
- *NITTTR-Module 3*
- *NITTTR-Module 5*
- *NITTTR-Module 7*
- *NITTTR-Module 8*
- *NPTEL- Theory of Non-destructive testing (8 weeks course)*
- *NPTEL –Nanobiophotonics:Touching our daily life (12 weeks course)*

#### **Technical Skills**

- Characterization Techniques - Experienced in using spectroscopic and analytical techniques like Fluorescence Spectrometer (Horiba Jobin Yvon), Time Correlated Single Photon Counting (TCSPC) (HJY), Confocal Micro Raman spectrophotometer (HJY).
- Computer Skills - Basic computer skills and experienced with data analysis software’s like LabSpec 5, Fluorescence-decay analysis software (DAS6), Matlab, SPSS +18, Origin.

#### **Reviewer of The Journal**

Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy